

Work Order ID 68833

Thursday, April 21, 2011 10:56:39 AM

Page 1

Item ID: D3943-053

Accept

Revision ID:

Item Name: Chain Assembly

Start Date: 4/26/2011 Start Qty: 4.00

Required Date: 5/20/2011 Req'd Qty: 4.00

Reference:

Approvals:

Process Plan: MUF

Date: 11-04-21

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D3943

C

100

Weld per dwg A/R Steel rod Batch: M9326 0.00

Large Fab

Memo

0.00

Large Fab

ASSEMBLE WITH CHAIN BEFORE WELDING

110

QC9- Inspect visual per QSI004- Fusion Welds 0.00

QC

Memo

0.00

Quality Control

120

QC5- Inspect part completeness to step on W/O 0.00

QC

Memo

0.00

Quality Control

S 11/06/12

EZ 11-6-1 (24)

11-06-01

(24)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 68833

Thursday, April 21, 2011 10:56:39 AM



Page 2

Item ID: D3943-053

Accept



Setup Start



Revision ID:

Stop



Item Name: Chain Assembly

Start Date: 4/26/2011 Start Qty: 4.00



Cust Item ID:

Required Date: 5/20/2011 Req'd Qty: 4.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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130

Hybrid safety Yellow 4.3.5.12

0.00



Powdercoat

Memo

0.00

Powder Coating

1- MASK CHAIN FROM THIS POINT ON PRIOR TO powdercoat AS PER DWG

2- POWDER COAT:

Start Time: _____

Oven Temperature: _____

Finish Time: _____

10:10
400 OF
10:40

4X Ø m/f 11/06/02

140

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

4 BR 11-6-2

150

Identify as per dwg & Stock Location: w/o

0.00



Packaging

Memo

0.00

Packaging

68810

12 11-6-2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 68833

Thursday, April 21, 2011 10:56:39 AM



Page 3

Item ID: D3943-053

Accept



Setup Start



Revision ID:

Stop



Item Name: Chain Assembly

Start Date: 4/26/2011 Start Qty: 4.00



Cust Item ID:

Required Date: 5/20/2011 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/6/11
MK
11-06-03

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, April 21, 2011 10:56:35 AM

Page 1

Work Order ID: 68833

Parent Item: D3943-053

Parent Item Name: Chain Assembly



Start Date: 4/26/2011

Required Date: 5/20/2011

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP RevA: add DEO DD 09.11.18 verified by:JLM IPP Rev:B as per
dwg REV.C DD 10.02.22 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3954-5 Chain Lug		Manufactured	No			100	Each	2.0000	1	4			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST097		2							
				63740		2							
D3954-9 GWT Chain Pin		Manufactured	No			100	Each	16.0000	1	4			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST097		16							
				52991		16							

68927 x4

EL 11-6-1

EL 11-6-1

4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

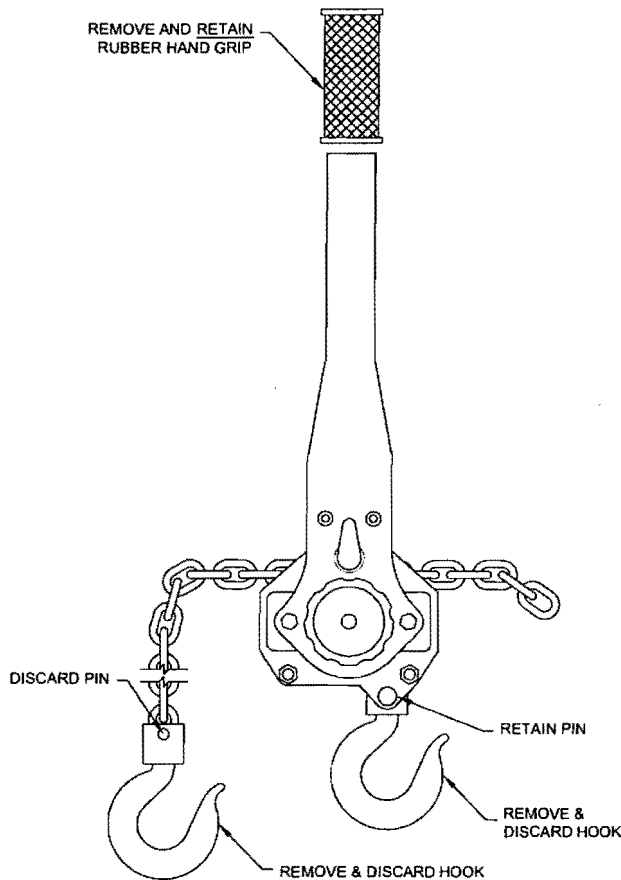
ITEM No.	QTY -041	QTY -051	QTY -053	PART NUMBER	DESCRIPTION	PREFERRED SUPPLIER
1	X			D3943-041	GROUND HANDLING CRANK ASSEMBLY	
5	1	X		D3943-051	HANDLE ASSEMBLY	
6	1		X	D3943-053	CHAIN ASSEMBLY	
11		1		D3943-1	HANDLE	M/F HANDLE FROM DIS-ASSEMBLED ITEM 39
12	1			D3943-3	HANDLE EXTENSION	
13		1		D3943-5	PLATE	
14		2		D3943-7	STUD	
15			1	D3943-9	CHAIN	USE CHAIN SUPPLIED WITH ITEM 39
21	1			D2890-4	LANYARD	
22	1			D3585-1	SET SCREW	
23	1			D3949-041	REMOVE BEFORE FLIGHT FLAG	
24			1	D3954-5	CHAIN LUG	
25	1			D3954-7	RATCHET LUG	
26			1	D3954-9	GWT CHAIN PIN	
31	1			AN5-11A	BOLT	
32	1			AN960-516	WASHER	
33	1			MS21042L5	NUT	
39	1			8143919	LEVER CHAIN HOIST (POWER FIST)	PRINCESS AUTO / 4000 lbs CAPACITY
41	1			S-1475	SPRING	REID SUPPLY
42	1			3408A59	BALL PLUNGER	McMASTER CARR
43	1			HX-15	SOCKET HEAD CAP SCREW 1/2-20 UNC X 0.75 LG	HASKINS
44	1			HX-16	SOCKET HEAD CAP SCREW 1/2-20 UNC X 1.0 LG	HASKINS

RELEASED
2010-10-18
WJ

C	RMV FINISH -041 (ZN A8-2), ADD NEW FINISH -051/-053/-1/-3 (A8-3/-4/-5), ADD CALIBRATION (A8-2), (1) HX-16 WAS HX-15 (B3-1, C3-1), PAR 10-001	CP	10.01.26
B	SHT 1 PL, ITEM 31 WAS AN4-10A, ITEM 32 WAS AN960-416, ITEM 33 WAS MS21042-4, ITEM 43 WAS 0.75 LG. SHEETS 2 - 5 NOTES: FINISH FOR ALL COMPONENTS NOW YELLOW SPRAY PAINT.	AJS	09.10.15
A	NEW ISSUE	AJS	09.05.13
REV.	DESCRIPTION	BY	DATE
DESIGN	DSTOW / AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	WJ	DRAWING NO.	REV. C
CHECKED	WJ	D3943	SHEET 1 OF 5
MFG. APPR.	WJ	TITLE	SCALE
APPROVED	N/A	GROSS WEIGHT TOW CRANK ASSY	NTS
DE APPR.	N/A	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	
DATE	10.01.26		

8 7 6 5 4 3 2 1

REMOVE AND RETAIN
RUBBER HAND GRIP

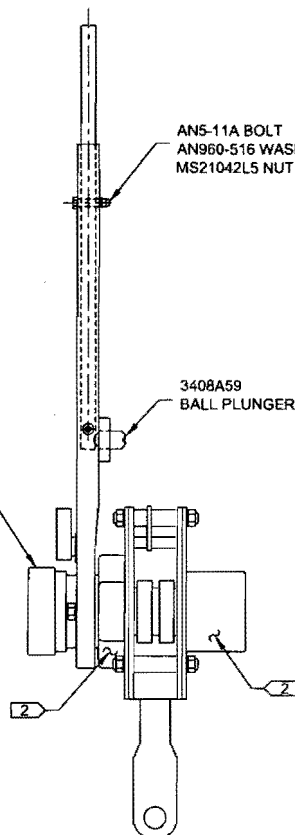


8143919 LEVER CHAIN HOIST
(SHOWN PRIOR TO MODIFICATION)
(CHAIN SHOWN SHORTENED FOR CLARITY)

AN5-11A BOLT
AN960-516 WASHER
MS21042L5 NUT

8143919
LEVER CHAIN HOIST

3408A59
BALL PLUNGER



(CHAIN NOT SHOWN FOR CLARITY)

RE-INSTALL
RUBBER HAND-GRIP
HERE

D2690-4 LANYARD

D3949-041 FLAG

HX-16 S/H CAP SCREW

D3585-1 SET SCREW

RE-INSTALL PIN

D3954-7 RATCHET LUG

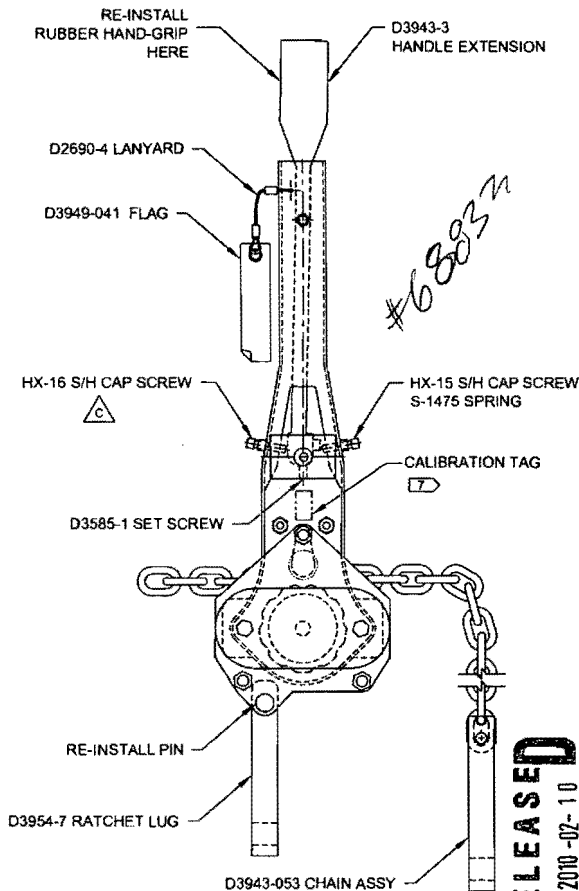
D3943-3
HANDLE EXTENSION

HX-15 S/H CAP SCREW
S-1475 SPRING

CALIBRATION TAG

D3943-053 CHAIN ASSY






(CHAIN SHOWN SHORTENED FOR CLARITY)



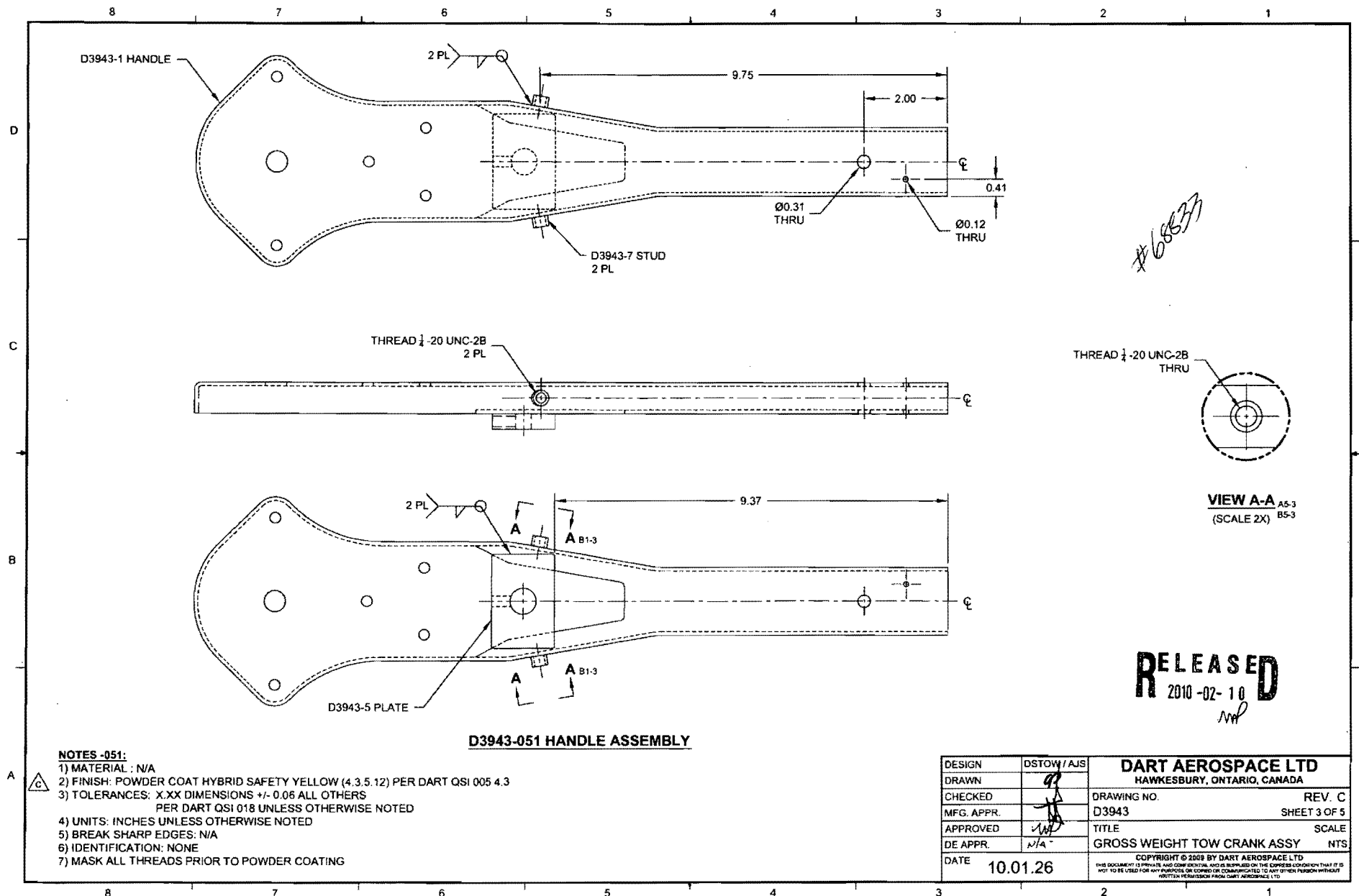
D3943-041 GROUND HANDLING CRANK ASSEMBLY

NOTES -041:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3943-041" USING FINE POINT PERMANENT INK MARKER
- 7) CALIBRATION TAG PER DART QSI 008 4.4 (ZN C1-2)

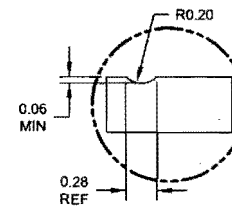
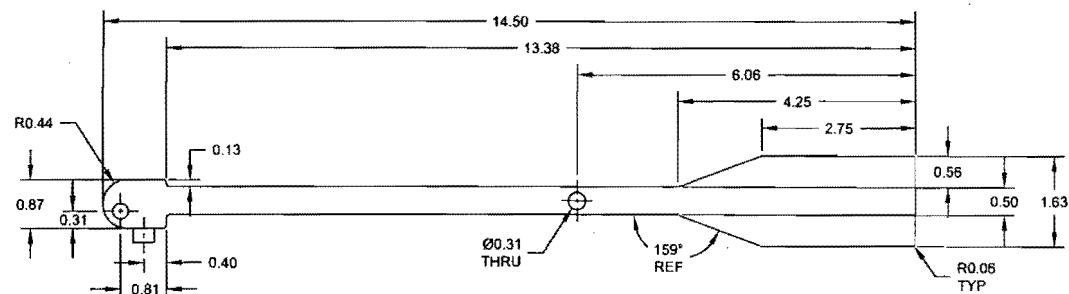
DESIGN	DSTOW / AJS	DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3943	SHEET 2 OF 5
APPROVED		TITLE	SCALE
DE APPR.		GROSS WEIGHT TOW CRANK ASSY	NTS
DATE	10.01.26	COPYRIGHT © 2009 BY DART AEROSPACE LTD	
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RELEASED
2010-02-10



8 7 6 5 4 3 2 1

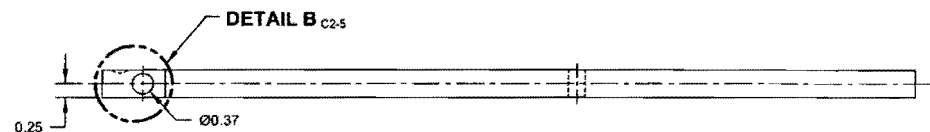
D



DETAIL B-B C7-5
(Dimple Detail)
(Scale 2X)

#60833

C



D3943-3 HANDLE EXTENSION

B

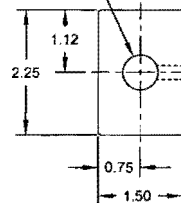
NOTES -11/-13:

1) MATERIAL -3 & -5: MILD STEEL, SHEET
AISI 1010-1025 OR ASTM A36/A366/A1008
OR CSA G40-21, 38W/44W/50W/60W/70W
REF DART SPEC M1010-S

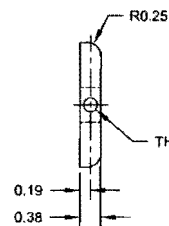
OR: MILD STEEL, BAR
AISI 1010-1025 OR ASTM A36/A366/A569/A570
OR CSA G40-21, 38W/44W/50W/60W/70W
REF DART SPEC M1010-B

-7: MILD STEEL, ROUND BAR
AISI 1018-1025
PER MIL-S-7097
REF DART SPEC M1018-R

THREAD $\frac{1}{8}$ -11 UNC-2B

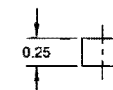


D3943-5 PLATE



THREAD $\frac{1}{8}$ -28 UNF-2B

Ø0.37 PILOT HOLE PER SHOP REQUIREMENT



D3943-7 STUD
(Scale 2X)

RELEASED
2010-02-10

A

- 2) FINISH -3: POWDER COAT HYBRID SAFETY YELLOW (4.3.5.12) PER DART QSI 005 4.3
-5 & -7: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE

DESIGN	DSTOW/AJS	DART AEROSPACE LTD	
DRAWN	97	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3943	SHEET 5 OF 5
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8 7 6 5 4 3 2 1

